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| 10/561,141 | 12/19/2005 | Thomas Anthony Stahl | PU030179 | 9416 |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/561,141 | STAHL ET AL. |
| | Examiner | Art Unit | |
| | CHRISTOPHER T. WYLLIE | 2465 | |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>23 December 2009</u>.

2a)☒ This action is **FINAL**.      2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>19 December 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/25/2010</u>

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)            **Office Action Summary**            Part of Paper No./Mail Date 20100326

## DETAILED OFFICE ACTION

1.      This action is responsive to the communication received December 23$^{rd}$, 2009.

Claims 1-22 have been entered and are presented for examination.

2.      Application 10/561,141 is a 371 of PCT/US04/20894 (06/30/2004) which claims

benefit to Provisional Applications 60/483,785 (06/30/2003) and 60/496,248.

3.      Applicant's arguments, filed December 23$^{rd}$, 2009, have been carefully

considered, but deemed non-persuasive.  The rejection of claims 1-22 is respectfully

maintained.  The rejection is reiterated below for Applicant's convenience.

### Claim Rejections - 35 USC § 101

4.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter is directed towards directed towards a signal

per se. The specification indicates that the claimed computer-readable storage medium

can be a signal **(Specification p. 16, lines 5-16)**.   Examiner suggests that Applicant

amend the limitation to recite "A computer readable non-transitory storage device

storing code, which when executed by a processor, for performing the method of claim

12."

### Claim Rejections - 35 USC § 103

5.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

6.      The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
     obviousness or nonobviousness.

7.      This application currently names joint inventors.  In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary.  Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

8.      Claims 1-2, 4-7, 12-14, 19, and 21-22 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Fujisawa (US 7,352,726) in view of Skarica et al. (US

7,171,121) in view of Akatsu et al. (US 6,496,862) in view of Pathak et al. (WO

01/074096).

        Regarding claim 1, Fujisawa discloses a method for transferring packet based

digital data between a first communications network and a second communications

network (see Figure 1, Ethernet Sub-network 2, Bridge 4, and IEEE 1394 Sub-network

3 [packets of data are transmitted and received in the Ethernet network and the 1394

network via Bridge 4]), said method comprising the steps of: receiving a stream of

packets based on digital data from the first communications network (column 5, lines

26-29 [the bridge transforms a packet transmitted from the Ethernet sub-network into a

predetermined system format and transmits it to the 1394 network]); and modifying

header information associated with the data packets in the stream into a format suitable

for communication through said established channel for transfer to said second

communications network (column 5, lines 26-32 [the bridge transforms the packet, sent

from the Ethernet network, into a predetermined system format in the data link layer and

transmits it to the 1394 and vice-versa]). Fujisawa does not disclose that the first

communications network has a prioritized communications protocol. However, Skarica

et al. discloses such a feature (column 4, lines 38-40 [Ethernet supports quality of

service protocols such as IEEE 802.1p, MPLS, and Diffserv]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Skarica et al. into the system

of Fujisawa. The method of Skarica et al. can be implemented by modifying the packets

of the Ethernet network to include a Type of Service (ToS) Field or a Quality of Service

(QoS) Field to specify the requested service by Ethernet Terminal 5. The motivation for

this is to enable the bridge to allocate enough bandwidth for the QoS requested.

The references as applied above are silent regarding determining a priority code

associated with the data packet and determining whether to open a channel comprising

an isochronous channel or an asynchronous channel. However, Akatsu et al. discloses

such a feature (column 9, lines 40-53 [an isochronous channel is open or an

asynchronous channel is opened based on the analysis of the header]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Akatsu et al. into the system of

the references as applied above. The method of Akatsu et al. can be combined into the

system by opening either an isochronous channel or an asynchronous channel based

on the analysis of the header. The motivation for this is to process real-time data (or

higher priority data) using isochronous channel over the IEEE 1394 network.

The references as applied above are silent regarding establishing a channel in

response to a detected presence of the priority code for communicating information in

the stream of packets based on digital data to a second network and the second

network having a communications protocol that allows for the setup and

communications over discrete channels of a reserved. However, Pathak et al. discloses

such a feature (p. 13, lines 1-9 and 25-29 and p. 14, lines 1-2 and 10-19 [based on the

type of traffic and the QOS parameters, a connection is made from reserved bandwidth

after the actual resources are considered]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Pathak et al. into the system

of the references as applied above. The method of Pathak et al. can be established by

enabling the bridge to establish a suitable channel based on the QoS associated with

the packet. The motivation for this is to ensure the transmission of data across the

network and thereby creating a more reliable network.

Regarding claim 2, Fujisawa further discloses that the first network is an Ethernet

network and the second communications is an IEEE 1394 network (see Figure 1,

Ethernet Sub-network 2, Bridge 4, and IEEE 1394 Sub-network 3 [packets of data are

transmitted and received in the Ethernet network and the 1394 network via Bridge 4]).

The references as applied above disclose all the recited subject matter in claim 1.

However, Akatsu et al. further discloses that the established channel is an isochronous

reserved bandwidth channel over the IEEE 1394 network (column 9, lines 40-53 [an

isochronous channel is open or an asynchronous channel is opened based on the

analysis of the header]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Akatsu et al. into the system of

the references as applied above. The method of Akatsu et al. can be combined into the

system by opening either an isochronous channel or an asynchronous channel based

on the analysis of the header. The motivation for this is to process real-time data (or

higher priority data) using isochronous channel over the IEEE 1394 network.

Regarding claim 4, Fujisawa further discloses determining whether data packet

requires transmission to a second device associated with the second communications

network (column 12, lines 31-34 [the CPU in Bridge 4 determines if the packet is to be

received by the Ethernet interface 13 or the 1394 interface 14]). The references as

applied above disclose all the recited subject matter in claim 1. However, Akatsu et

al. further discloses establishing a reserved bandwidth data transmission channel for communicating the data stream path to the second device based on a priority value includes in the data packet (column 9, lines 40-53 [an isochronous channel is open or an asynchronous channel is opened based on the analysis of the header]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Akatsu et al. into the system of the references as applied above. The method of Akatsu et al. can be combined into the system by opening either an isochronous channel or an asynchronous channel based on the analysis of the header. The motivation for this is to process real-time data (or higher priority data) using isochronous channel over the IEEE 1394 network.

Regarding claim 5, Fujisawa discloses an apparatus for proving packet-based digital communications between a first network communications network and a second communications network (see Figure 1, Ethernet Sub-network 2, Bridge 4, and IEEE 1394 Sub-network 3 [packets of data are transmitted and received in the Ethernet network and the 1394 network via Bridge 4]), the apparatus comprising a first transceiver for communicating with the first network (see Figure 2, Ethernet Interface 13); a second transceiver adapted for communicating with the second communications network (see Figure 2, 1394 Interface 14), a processor in communication with the first and second transceivers (see Figure 2, CPU 11); wherein the processor is adapted to perform a first modification process to convert a data packet received form the first transceiver into a format suitable for communication through the second network and the processor is further configured to perform a second modification to convert a data

packet received from the second transceiver into a suitable format for communication through the first transceiver to the first network (column 5, lines 26-32 [the bridge transforms a packet from the Ethernet network into a predetermined format in the data link layer and transmits it to the 1394 network and vice-versa]). Fujisawa does not disclose that the first communications network has a prioritized communications protocol. However, Skarica et al. discloses such a feature (column 4, lines 38-40 [Ethernet supports quality of service protocols such as IEEE 802.1 p, MPLS, and Diffserv]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Skarica et al. into the system of Fujisawa. The method of Skarica et al. can be implemented by modifying the packets of the Ethernet network to include a Type of Service (ToS) Field or a Quality of Service (QoS) Field to specify the requested service by Ethernet Terminal 5. The motivation for this is to enable the bridge to allocate enough bandwidth for the QoS requested.

The references as applied above are silent regarding determining a priority code associated with the data packet and determining whether to open a channel comprising an isochronous channel. However, Akatsu et al. discloses such a feature (column 9, lines 40-53 [an isochronous channel is open or an asynchronous channel is opened based on the analysis of the header]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Akatsu et al. into the system of the references as applied above. The method of Akatsu et al. can be combined into the

system by opening either an isochronous channel or an asynchronous channel based on the analysis of the header. The motivation for this is to process real-time data (or higher priority data) using isochronous channel over the IEEE 1394 network.

The references as applied above are silent regarding setting up a channel in response to the priority code for communicating information in the stream of packets based on digital data to a second network and the second network having a communications protocol that allows for set up and communications over discrete channels of a reserved bandwidth. However, Pathak et al. discloses such a feature (p. 13, lines 1-9 and 25-29 and p. 14, lines 1-2 and 10-19 [based on the type of traffic and the QOS parameters, a connection is made from reserved bandwidth after the actual resources are considered]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Pathak et al. into the system of the references as applied above. The method of Pathak et al. can be established by enabling the bridge to establish a suitable channel based on the QoS associated with the packet. The motivation for this is to ensure the transmission of data across the network and thereby creating a more reliable network.

Regarding claim 6, Fujisawa further discloses that the first communications system is an Ethernet network (see Figure 1, Ethernet Sub-network 2).

Regarding claim 7, Fujisawa further discloses that the second communications network is an IEEE 1394 network (see Figure 1, IEEE Sub-network 3).

Regarding claim 12, Fujisawa discloses a method for adapting packets-based digital communications between a first communications network and a second communications network (see Figure 1, Ethernet Sub-network 2, Bridge 4, and IEEE 1394 Sub-network 3 [packets of data are transmitted and received in the Ethernet network and the 1394 network via Bridge 4]), said method comprising the steps of: detecting in a communication form a first device in the first communications network, a prioritized data packet, determining whether the prioritized data packet requires transmission to a second device in the second communications network (column 12, lines 31-34 [the CPU in Bridge 4 determines if the packet is to be received by the Ethernet interface 13 or the 1394 interface 14]), determining that said reserved data transmission channel has been opened (column 4, lines 46-48 [the entire network is controlled according to TCP/IP, TCP incorporates a connection establishment stage, therefore either network has a protocol that allows for setup and communications on a channel; establishment/termination is done with an ACK/FIN message]) and modifying the data packet to be suitable for communications over the second communications network (column 5, lines 26-32 [the bridge transforms a packet from the Ethernet network into a predetermined format in the data link layer and transmits it to the 1394 network and vice-versa]). Fujisawa does not disclose that the first communications network has a prioritized communications protocol. However, Skarica et al. discloses such a feature (column 4, lines 38-40 [Ethernet supports quality of service protocols such as IEEE 802.1 p, MPLS, and Diffserv]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Skarica et al. into the system of Fujisawa. The method of Skarica et al. can be implemented by modifying the packets of the Ethernet network to include a Type of Service (ToS) Field or a Quality of Service (QoS) Field to specify the requested service by Ethernet Terminal 5. The motivation for this is to enable the bridge to allocate enough bandwidth for the QoS requested.

The references as applied above are silent regarding determining a priority code associated with the data packet and determining whether to open a channel comprising an isochronous channel. However, Akatsu et al. discloses such a feature (column 9, lines 40-53 [an isochronous channel is open or an asynchronous channel is opened based on the analysis of the header]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Akatsu et al. into the system of the references as applied above. The method of Akatsu et al. can be combined into the system by opening either an isochronous channel or an asynchronous channel based on the analysis of the header. The motivation for this is to process real-time data (or higher priority data) using isochronous channel over the IEEE 1394 network.

The references as applied above are silent regarding the second communications network having a communications protocol that allows for setup and communications over discrete channels of a reserved bandwidth; establishing communications with said second device to open a reserved bandwidth data transmission channel in response to the priority code. However, Pathak et al. discloses

such a feature (p. 13, lines 1-9 and 25-29 and p. 14, lines 1-2 and 10-19 [based on the type of traffic and the QOS parameters, a connection is made from reserved bandwidth after the actual resources are considered]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Pathak et al. into the system of the references as applied above. The method of Pathak et al. can be established by enabling the bridge to establish a suitable channel based on the QoS associated with the packet. The motivation for this is to ensure the transmission of data across the network and thereby creating a more reliable network.

Regarding claim 13, Fujisawa further discloses that the first communications system is an Ethernet network (see Figure 1, Ethernet Sub-network 2).

Regarding claim 14, Fujisawa further discloses that the second communications network is an IEEE 1394 network (see Figure 1, IEEE Sub-network 3).

Regarding claim 19, the references as applied above disclose all the recited subject matter in claim 12. However, Pathak further discloses that the communications with the second network are monitored for bandwidth for bandwidth usage and communications is established over the network when necessary to modify the amount of the reserved bandwidth based on the bandwidth usage (p. 19, lines 2833 and p. 20, lines 1-3 [bandwidth is monitored to determine if a connection is able to be made; if resources are available, the bandwidth is allocated and the connection is made; after the communication is complete, the connection is torn down and the bandwidth is de-allocated]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Pathak et al. into the system of the references as applied above. The method of Pathak et al. can be established by enabling the bridge to establish a suitable channel based on the QoS associated with the packet. The motivation for this is to ensure the transmission of data across the network and thereby creating a more reliable network.

Regarding claim 21, Fujisawa further discloses a computer readable medium storing code which when executed by a processor performs the method of claim 12 (see Figure 1, Memory 12).

Regarding claim 22, Fujisawa discloses an apparatus for proving packet-based digital communications between a first network communications network and a second communications network (see Figure 1, Ethernet Sub-network 2, Bridge 4, and IEEE 1394 Sub-network 3 [packets of data are transmitted and received in the Ethernet network and the 1394 network via Bridge 4]), the apparatus comprising a first transceiver for communicating with the first network (see Figure 2, Ethernet Interface 13); a second transceiver adapted for communicating with the second communications network (see Figure 2, 1394 Interface 14), a processor in communication with the first and second transceivers (see Figure 2, CPU 11); wherein the processor is adapted to perform a first modification process to convert a data packet received form the first transceiver into a format suitable for communication through the second network and the processor is further configured to perform a second modification to convert a data packet received from the second transceiver into a suitable format for communication

through the first transceiver to the first network (column 5, lines 26-32 [the bridge

transforms a packet from the Ethernet network into a predetermined format in the

data link layer and transmits it to the 1394 network and vice-versa]). Fujisawa does not

disclose that the first communications network has a prioritized communications

protocol. However, Skarica et al. discloses such a feature (column 4, lines 38-40

[Ethernet supports quality of service protocols such as IEEE 802.1 p, MPLS, and

Diffserv]).

        Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Skarica et al. into the system

of Fujisawa. The method of Skarica et al. can be implemented by modifying the packets

of the Ethernet network to include a Type of Service (ToS) Field or a Quality of Service

(QoS) field to specify the requested service by Ethernet Terminal 5. The motivation for

this is to enable the bridge to allocate enough bandwidth for the QoS requested.

        The references as applied above are silent regarding determining a priority code

associated with the data packet and determining whether to open a channel comprising

an isochronous channel. However, Akatsu et al. discloses such a feature (column

9,lines 40-53 [an isochronous channel is open or an asynchronous channel is opened

based on the analysis of the header]).

        Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Akatsu et al. into the system of

the references as applied above. The method of Akatsu et al. can be combined into the

system by opening either an isochronous channel or an asynchronous channel based

on the analysis of the header. The motivation for this is to process real-time data (or

higher priority data) using isochronous channel over the IEEE 1394 network.

The references as applied above are silent regarding setting up a channel in

response to the priority code for communicating information in the stream of packets

based on digital data to a second network and the second network having a

communications protocol that allows for set up and communications over discrete

channels of a reserved bandwidth. However, Pathak et al. discloses such a feature (p.

13, lines 1-9 and 25-29 and p. 14, lines 1-2 and 10-19 [based on the type of traffic

and the QOS parameters, a connection is made from reserved bandwidth after the

actual resources are considered]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Pathak et al. into the system

of the references as applied above. The method of Pathak et al. can be established by

enabling the bridge to establish a suitable channel based on the QoS associated with

the packet. The motivation for this is to ensure the transmission of data across the

network and thereby creating a more reliable network.


9.      Claims 3, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Fujisawa (US 7,352,726)in view of Skarica et al. (US 7,171,121 ) in view of Akatsu

et al. (US 6,496,862) in view of Pathak et al. (WO 01/074096) as applied to claims 1,5,

and 12 above, and further in view of Brewer (6,657,999).

Regarding claim 3, the references as applied above disclose all the claimed

subject matter recited in claim 1, but do not disclose the step of modifying header

information comprises embedding an IP header associated with the data packet into an

OSI Layer 3 header in the packet suitable for transmission over the second

communications network. However, Brewer discloses such a feature (see Figure 4b,

steps 54 and column 16, lines 53-63 [a source host computer on the 1394 network

sends a packet to a destination host computer of the Ethernet network via host

computer H4, the link layer of Host Computer H4 changes the destination HPA of the

packet so that the proper destination host computer receives that packet]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Brewer into the system of the

references as applied above. The method of Brewer can be implemented by enabling

Bridge 4 to change the destination HPA of the packet so that the proper destination host

computer in the Ethernet network receives that packet. The motivation for this is to

enable communication across differently structured networks

Regarding claim 10, the references as applied above disclose all the claimed

subject matter recited in claim 5, but do not disclose the step of modifying header

information comprises embedding an IP header associated with the data packet into an

OSI Layer 3 header in the packet suitable for transmission over the second

communications network. However, Brewer discloses such a feature (see Figure 4b,

steps 54 and column 16, lines 53-63 [a source host computer on the 1394 network

sends a packet to a destination host computer of the Ethernet network via host

computer H4, the link layer of Host Computer H4 changes the destination HPA of the

packet so that the proper destination host computer receives that packet]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Brewer into the system of the

references as applied above. The method of Brewer can be implemented by enabling

Bridge 4 to change the destination HPA of the packet so that the proper destination host

computer in the Ethernet network receives that packet. The motivation for this is to

enable communication across differently structured networks.

Regarding claim 16, the references as applied above disclose all the claimed

subject matter recited in claim 12, but do not disclose the step of modifying header

information comprises embedding an IP header associated with the data packet into an

OSI Layer 3 header in the packet suitable for transmission over the second

communications network. However, Brewer discloses such a feature (see Figure 4b,

steps 54 and column 16, lines 53-63 [a source host computer on the 1394 network

sends a packet to a destination host computer of the Ethernet network via host

computer H4, the link layer of Host Computer H4 changes the destination HPA of the

packet so that the proper destination host computer receives that packet]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Brewer into the system of the

references as applied above. The method of Brewer can be implemented by enabling

Bridge 4 to change the destination HPA of the packet so that the proper destination host

computer in the Ethernet network receives that packet. The motivation for this is to

enable communication across differently structured networks

10.      Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fujisawa (US 7,352,726) in view of Skarica et al. (US 7,171,121 ) in view of Akatsu et

al. (US 6,496,862) in view of Pathak et al. (WO 01/074096) as applied to claims 5 and

12 above, and further in view of Walke et al. (US 7,016,676).

        Regarding claim 8, the references as applied above disclose all the claimed

subject matter recited in claim 5, but do not disclose that the second communications

network is a HiperLAN/2 network. However, Walke et al. discloses such a feature

(column 5, lines 21-30 and 37-40 [central control station 13 controls access for the

HiperLAN/2 network and the IEEE 802.11a network (802.11a is a wireless Ethernet

standard)]).

        Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Walke et al. into the system of

the references as applied above. The method of Walke et al. can be implemented by

replacing the IEEE 1394 network with a HiperLAN/2 network. The motivation for this is

to enable communications from Ethernet-HiperLAN/2 networks.

        Regarding claim 15, the references as applied above disclose all the claimed

subject matter recited in claim 12, but do not disclose that the second communications

network is a HiperLAN/2 network. However, Walke et al. discloses such a feature

(column 5, lines 21-30 and 37-40 [central control station 13 controls access for the

HiperLAN/2 network and the IEEE 802.11a network (802.11a is a wireless Ethernet
standard)]).

Therefore, it would have been obvious to one of ordinary skill in the art at the
time the invention was made to implement the method of Walke et al. into the system of
the references as applied above. The method of Walke et al. can be implemented by
replacing the IEEE 1394 network with a HiperLAN/2 network. The motivation for this is
to enable communications from Ethernet-HiperLAN/2 networks.


11.     Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Fujisawa (US 7,352,726) in view of Skarica et al. (US 7,171,121 ) in view of Akatsu et
al. (US 6,496,862) in view of Pathak et al. (WO 01/074096) as applied to claims 5 and
12 above, and further in view of Lemieux et al. (US 6,968,374).

Regarding claim 9, the references as applied above disclose all the recited
subject matter in claim 5, but do not explicitly disclose that the processor establishes the
need to set up a reserved bandwidth communications channel through the second
transceiver based on the value of the priority code received by the first transceiver.
However, Lemieux et al. discloses such a feature (column& lines 22-25 [the packet
flows have associated QoS requirements and the network channels are established to
ensure that those requirements are met]).

Therefore, it would have been obvious to one of ordinary skill in the art at the
time the invention was made to implement the method of Lemieux et al. into the system
of the references as applied above. The method of Lumieux et al. can be implemented

by associated packet flows with a QOS requirement. The motivation for this is to ensure that the requirements are met when the channels are allocated.

Regarding claim 20, the references as applied above disclose all the recited subject matter in claim 12, but do not explicitly disclose evaluating a portion of a data header contained in the data packet and requesting a bandwidth size based on the results of the evaluation. However, Lemieux et al. discloses such a feature(column& lines 22-25 [the packet flows have associated QoS requirements and the network channels are established to ensure that those requirements are met]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Lemieux et al. into the system of the references as applied above. The method of Lumieux et al. can be implemented by associated packet flows with a QOS requirement. The motivation for this is to ensure that the requirements are met when the channels are allocated.


12.     Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujisawa (US 7,352,726) in view of Skarica et al. (US 7,171,121 ) in view of Akatsu et al. (US 6,496,862) in view of Pathak et al. (WO 01/074096) as applied to claim 5 above, and further in view of Hamamoto et al. (6,038,233).

Regarding claim 11, the references as applied above disclose all the claimed subject matter recited in claim 5, but do not explicitly recite that the second modification process strips from a data packet received from the second communications network a data header associated the second network and where is the second modification

process further converts the data packet into a format suitable for transmission to the

first network. However, Hamamoto et al. discloses such a feature (column 8, lines 50-54

[the header translation unit replaces the source IPv6 IP address with an IPv4 IP

address]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the method of Hamamoto et al. into the

system of the references as applied above. The method of Hamamoto et al. can be

implemented by enabling Bridge 4 to replace addresses to suit the network that the

packet is being forwarded. The motivation for this is to enable different networks to

communicate via Bridge 4.


13.    Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Fujisawa (US 7,352,726) in view of Skarica et al. (US 7,171,121 ) in view of Akatsu et

al. (US 6,496,862) in view of Pathak et al. (WO 01/074096) as applied to claim 12

above, and further in view of RFC 0793 (Transmission Control Protocol - September

1981).

Regarding claim 17, the references as applied above disclose all the claimed

subject matter recited in claim 12, but do not disclose determining there is no more data

to be received from the first device and establishing communications with the second

device to close the reserved data transmission channel, However, RFC 0793 discloses

such a feature (p. 16 of 88, lines 1-2 and p. 20 of 88, line 9 [receiving a FIN control flag

indicated that there is no more data form sender and to clear the connection]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a FIN control flag to end a connection between to entities. The motivation for this is enable the system to effectively allocate and de\-allocate bandwidth as connections are requested and terminated.


14.     Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujisawa (US 7,352,726) in view of Skarica et al. (US 7,171,121 ) in view of Akatsu et al. (US 6,496,862) in view of Pathak et al. (WO 01/074096) as applied to claim 12 above, and further in view of Naudus (US 2002/0016837).

Regarding claim 18, the references as applied above disclose all the claimed subject matter recited in claim 12, but do not disclose closing the channel after a predetermined period of time within no further communications is received from the first device. However, Naudus discloses such a feature (paragraph 0060, lines 11-14 [the nodes in the network monitor connections and terminate those connections that have been idle for a predetermined amount of time]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Naudus into the system of the references as applied above. The method of Naudus can be implemented by enabling Bridge 4 to monitor all connections and to terminate connections that have remained idle for a period of time. The motivation for this is to effectively use limited network resources.

### *Response to Arguments*

Applicant's arguments regarding the 35 USC §101 rejection are not persuasive. Applicant's specification discloses "computer readable storage devices." In its broadest reasonable interpretation. The computer readable storage devices can be directed towards a signal per se. Examiner suggests that Applicant amend the limitation to recite "A computer readable <u>non-transitory</u> storage device storing code, which when executed by a processor, for performing the method of claim 12."

15.    In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

16.    On page 11 of the Remarks section, Applicant argues that the Fujisawa (US 7,352,726) references merely disclose a communication method for connecting two different networks to form a single network without wasting MAC address and fails to disclose receiving a stream of packets based on digital data from a first communications network having a prioritized communications protocol. However, the examiner respectfully disagrees. Fujisawa discloses that packets of data are transmitted and received/transmitted between the Ethernet network and the 1394 network **(see Figure 1)**.

The Skarica et al. (US 7,171,121) reference is provided to show that it is well known in the art that an Ethernet network has prioritized communications protocol.

Skarica et al. discloses that Ethernet supports quality of service protocols such as IEEE

802.1p and DiffServ **(column 4, lines 38-40)**.  Also well known in the art, is the fact that

data such as voice data associated with a user that has a higher QoS than e-mail data

associated with the same user.

17.     On page 13 of the Remarks section, Applicant argues that the Akatsu et al. (US

6,496,862) reference is not combinable with the system created using the Fujisawa and

Skarica et al. references.  However, Akatsu et al. discloses that packets are transmitted

from an external network and are received at a home gateway and converted to an

IEEE 1394 format **(column 10, lines 15-19)**.  Akatsu et al. further discloses that an

asynchronous channel or an isochronous channel is opened based on the results of

determining the type of packet by analyzing the header of the packet **(column 9, lines

40-53)**.  In the same paragraph, Akatsu et al. further discloses that the real-time data

(voice or video) is sent using the asynchronous packet bus and non-real-time data (e-

mail) is sent using an isochronous bus.  It would have been obvious to one skill in the

art to combine Akatsu et al. with the references referred to above.  The motivation is

send higher priority packets over a high speed connection.

18.     On page 14 of the Remarks section, Pathak et al. (WO 01/074096) is not

combinable with the system created using the Fujisawa, Skarica et al. and , Akatsu et

al. references because Pathak et al. is nonanalogous art, it has been held that a prior

art reference must either be in the field of applicant's endeavor or, if not, then be

reasonably pertinent to the particular problem with which the applicant was concerned,

in order to be relied upon as a basis for rejection of the claimed invention.  See *In re*

*Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the instant

application establishes a channel in response to the detected presence on the priority

code for communicating the information in the stream of packets based on digital data.

Pathak et al. disclose setting up a connection based on the type of traffic and the QoS

parameters **(p.13, lines 1-9 and 25-29 and p. 14, lines 1-2 and 10-19)**, which solves

the same problem. One of ordinary skill in the art would recognize that a connection to

the IEEE 1394 network can be selected based on the type of traffic and the QoS

associated with the traffic.

### *Conclusion*

19.    **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHRISTOPHER T. WYLLIE whose telephone number is

(571) 270-3937.  The examiner can normally be reached on Monday through Friday 8:30am to 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988.  The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.  Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher T. Wyllie/
Examiner, Art Unit 2465

/Jayanti K. Patel/

Supervisory Patent Examiner, Art Unit 2465